

THE

Oldham Quilmerian.



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# The Oldham Hulmeian.

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## School Notes.

**N**EW BOYS, September, 1908 :—Lees, Thomas, Halliwell, Carter, Henthorn, Cooling, Worrall, Hilton, H. Radcliffe, Beaumont, Wilfred Noble, T. V. Ashton, Cave, Cheetham, DeCourcy, Foweather, Ingham, Roseblade, Vipond, J. E. Ford, Marshall, E. L. Ford, Scholes, Cooper, Beech, B. Horsfall. January, 1909 :—D Gregory, J. Gregory, Barlow, Lees, Crowther.

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In July Mr. Earnshaw left us to become Second Master at Ashton-in-Makerfield, and we parted from him with deep regret and with memories of quiet devoted services in all good works connected with the School; the Debating Society was an especial subject of his care and attention.

Mr. Webber also left us to go to Brockley, and we lost a master who was always stimulating in thought and no less active on the field.

\* \* \*

We welcome Mr. F. H. Cockell, B.A., II Class Classical Tripos, Foundation Scholar of Queen's College, Cambridge, who comes to us from Forest School, Walthamstow, with a splendid record both as a Classical Master and as an Athlete. Knowing him by experience also, we are glad to find that he is settling down amongst us.

We also welcome Mr. C. K. Dove, B.A., Maths. Tripos, Exhibitioner of Magdalene College, Cambridge, as second Mathematical Master. Mr. Dove has been appointed a Vice-President of the Debating Society.

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Four Masters played in the Masters' and Doctors' team against the School, and play regularly with the School.

There is talk of a Gymnastic Display and House Competition either at the end of this term or early in next term. Now that the Football season is practically over, and before Cricket begins we have a gap in our athletic life which this competition should help to fill. This is of course the natural place for School Sports if we could only count on having fine weather just before the Easter holidays.

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In many schools Hockey occupies the season between football and cricket, and we might well consider the advisability of introducing it here. The chief objection is that we require to give the School field a rest after the hard wear of the football season.

\* \* \*

Speech Day was deferred to the Spring term this year. Sir Edward Donner presented the Prizes and gave a most stimulating and interesting address, and we thank him very much for his kindness in coming to our function. A full report will be found in our next number.

\* \* \*

We have not had a better English Play than this year's "Julius Cæsar." Hammersley made a fine Mark Anthony, with the clear delivery of an accustomed orator. Stopford was an imposing Julius Cæsar. Mellor and Park as Brutus and Cæsius spoke well and clearly, but all the players were exceedingly good.

A high level of excellence was also attained in the French Play, "Le Bourgeois Gentilhomme." Perhaps we might specially single out the work of W. R. Wilde as M. Jourdain, and the excellent pronunciation of A. Buckley, which was not, however, as well heard as it merited.

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We congratulate R. O. Mellor on passing the Final Examination of the Law Society, also A. C. W. Hutchinson on passing his Second Examination in Dentistry and taking his First M.B.

J. E. Whitehead, M.A. (Manc.), has been appointed Assistant Master at Emanuel School, Wandsworth, London

J. West, B.Sc. (Manc.), has been appointed Science Master at Cleobury Mortimer Grammar School, Shropshire.

B. Laycock, B.Sc. (Manc.), has been appointed Science Master at Hawarden.

\* \* \*

Spring Term ends on Friday, 2nd April, and the Summer Term commences on Tuesday, 20th April.

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We tender our congratulations and best wishes to Mr. and Mrs. Cockell on the occasion of their wedding.

We are requested by Mr. Cockell to express the thanks of himself and Mrs. Cockell to the Headmaster and Mrs. Pickford, to his colleagues, and to the boys for the many tokens of goodwill received on that occasion.

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### Natural History Society Notes.

**T**HIS year the Natural History Society has been fairly active, although it has not come much to the front. About half the boys in the School are members, many new boys being among that number. The most active branch of the Society is undoubtedly the Meteorological Section. The work of this section is not only interesting and instructive to the members themselves, but is also of much use to the School generally.

The officers this year are :—President, the Headmaster ; treasurer, Mr. Pym ; secretary, W. R. Wilde ; general committee, the Headmaster, Mr. Pym, Dr. Potter, Stopford, Hammersley, Bradbury, J. W. Slater, E. E. Mellor, E. Brierley, W. K. Slater, and J. Wrigley.

On Thursday, December 10th, we held our Annual Tea. About seventy members sat down to an excellent repast which had been kindly prepared by Mrs Pickford. A vote of

thanks, proposed to her by J. W. Slater and seconded by W. R. Wilde, was heartily carried. The members then adjourned to the Big School and participated in games kindly lent by Mr. Pickford. Songs were then given by Mr. Dove, Mr. Pym, R. U. Taylor, and Form III.; recitations by Church and Sladen; and pianoforte solos by A. Fitton, who also ably accompanied the various songs. A capital paper on "Seeds" was given by J. Kershaw, and Mr. Pym gave an enjoyable lantern lecture on "Norway," which he had visited during the summer vacation. In the meantime an electrical and scientific exhibition was given in the physical laboratory by Dr. Potter and some members of the Sixth Form, and was much appreciated.

The headmaster moved a vote of thanks to all who had entertained the Society during the evening, and the members signified their hearty approval. Mr. Pym replied, and a pleasant evening ended with the singing of the National Anthem.

We owe our thanks to Dr. Potter for a capital paper on "Photography" which he gave at a meeting on October 8th, and we are also greatly indebted to Mr. W. Jackson, of Chamber Road, for allowing the older members to visit his conservatories on the last day of last term, where, amongst other things, we saw a banana bearing fruit, and cotton plants with pods just opening.

W. R. W.

Appended are the Sectional Reports:—

#### I.—METEOROLOGICAL SECTION.

We are pleased to note a continuous keenness in this branch of our work. The readings at the various instruments are still being taken regularly, and we shall soon be the possessors of some quite valuable information concerning the fluctuations of the weather in this district. This will be very gratifying, since we ourselves shall be able to speak for the accuracy of the readings. Dr. Potter still continues to take a very keen interest in the work of

this Society, and has promised to prepare a Lecture on Meteorology, which will take place shortly. He proposes to use our own readings to illustrate his remarks, and on the whole the lecture promises to be a very interesting one. We are glad to welcome W. K. Slater and E. E. Mellor as supervisors in place of the previous ones, who have resigned owing to their appointment to other offices. We again desire to thank all those who have in any way helped forward the work, and hope that they will continue with their previous keenness.

## II.—FIELD SECTION.

J. W. S.

Partly owing to football, and partly owing to weather during the last term, the Field Section of the Natural History Society has not been very active. There was, however, a stickleback which was kept under observation in the library for some weeks, at the end of which time it was returned to its native pond not far from the School. One of the most uncommon birds seen this last term was the magpie, which had its nest at the bottom end of the Alexandra Park.

At the Natural History Tea, J. Kershaw gave an interesting paper on "Dispersion of Seeds," which is fully reported on another page.

This Section of the Society, however, is hoping to have a more active time during the spring and summer months, and rambles have already been arranged.

E. B.

## III.—PHOTOGRAPHIC SECTION.

The Photographic Section has not been very active this term, yet on the whole some exceedingly good work has been accomplished. The chief events of the term were a lecture on "The Theory of Photography," by Dr. Potter; and an Exhibition of Photographic Prints.

On October 10th, a Photographic Exhibition was held. Here the members of the Society displayed specimens of almost every branch of photography. The first prize was won by T. G. Taylor, whose six excellent exhibits were very artistically mounted. The second prize, for which there was a very keen competition, was won by W. Booth. J.S.—S.S.H.

## Library Notes.

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Many boys have left the School, and have forgotten the pleasant custom of presenting a book to the Library, as something by which their connection with the School may be remembered. W. S. Booth did not forget, and we thank him for his volume. The Library Committee hope that boys will not overlook this matter in future.

Last term we had a Chess Tournament, and many boys entered for it. The games were, on the whole, very exciting, and created no small amount of interest. The prizes, which were kindly given by the Headmaster, were won by H. Bradbury and A. Buckley.

Last term Library privileges were extended to all boys in the School. Many boys have availed themselves of the opportunities given by these privileges.



## Swimming Notes.

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**T**HIS year we are not able to report quite so successful a Swimming season as in former years. This is probably due to the slackness demonstrated in this direction by a large part of the Upper School, who are quite satisfied to be able to swim a few lengths of the bath in a long time. It is hoped that next season they will see to it that there is a great improvement in the swimming of the School. There is no excuse whatever for a boy who is physically fit not being able to swim well, when he has the services of an efficient instructor like Mr. Onions. However, while the upper part of the School have been uninterested, the instructor has done excellent work among the smaller boys, and we hope to have some good swimmers from them this year.

The Gala was a fairly successful one, as will be seen from the report on another page. The Squadron Race was especially exciting, Assheton House winning a very close race by about a yard.

It is hoped that this year sufficient interest will be taken to permit some lessons in life-saving, which are not only very interesting but also very useful.

In conclusion, our best thanks are due to the instructor for the very able way in which he has performed his work.

J. W. S.



## Athletic Sports.

**T**HE Annual Sports were held on Thursday, July 30th. A lot of trouble had been taken by masters and boys to make them a success. Mr. Earnshaw was, as usual, untiring in his efforts, and was kindly assisted by the headmaster. The morning of the day appointed was rather wet, and it was feared that the Sports would have to be postponed. The weather, however, cleared up, and the Sports were commenced. Despite the unpromising morning, there was a fairly large number of spectators, and these saw some keen racing, the Obstacle Race creating great amusement.

The Half-Mile (under 14) was run on the Tuesday previous, when J. Ashton, with 40 yards start, proved the winner.

For the Mile Race, the same day, ten turned out, and a keen race was expected. A close finish between Booth, Robertson, and Taylor (all scratch) was anticipated, but Robertson won easily, running strongly throughout. The second man—T. G. Taylor—came with a fine sprint at the finish, but was a long way behind Robertson. V. H. Gartside was placed third.

The 100 yds. (open) and Quarter-Mile (Senior) were, as expected, splendid races. In the former, only three turned out, and a fine race was seen. Taylor won, with Booth second, and Robertson third. For the Quarter-Mile, Booth did not turn out, and a close struggle was expected between Robertson and Taylor. The latter, however, led all the way, winning by about three yards from the former. Bradbury was placed third.



The under 14 Long Jump was very fair, but the open was rather good.

In the High Jump, Booth secured the Senior with a good jump, and Clynes won the Junior.

The Senior events were to a great extent monopolised by W. S. Booth, Robertson, and T. G. Taylor; while in the Juniors, Ashton and Bunting seemed to carry off most of the prizes; and it was remarkable that four out of these five boys were in the same house.

The Senior Championship Cup was won by T. G. Taylor with 40 points (1st in Long Jump, 100 yds., 220 yds., Quarter-Mile, 2nd in the Mile, and 3rd in the High Jump). Robertson came next with 31 points, and W. S. Booth third with 23.

The Junior Championship Cup fell to Bunting, who was 1st in the Quarter-Mile, 100 yds., 220 yds., and 2nd in the High Jump and Half-Mile (all under 14), thus totalling 21 points. Ashton came second with 16 points.

The House Championship Shield was easily won by Assheton House (captain, T. P. Robertson), Lees coming second, and Platt third.

List of successful competitors:—

Half-Mile Handicap (under 14). 1 J. Ashton; 2 J. A. Bunting; 3 J. C. Wilde.

One Mile Handicap (over 14). 1 T. P. Robertson; 2 T. G. Taylor; 3 V. H. Gartside. Time 5 mins. 23 $\frac{2}{3}$  secs.

Throwing Cricket Ball (under 14). 1 A. B. Greaves; 2 H. Bradshaw. Distance 47 $\frac{1}{3}$  yds.

Throwing Cricket Ball (open). 1 W. S. Booth; 2 R. T. Ebre; 3 T. P. Robertson. Distance 75 $\frac{1}{3}$  yds.

220 yds. Handicap (under 14). 1 J. A. Bunting; 2 F. W. Brearley; 3 J. Ashton. Time 32 $\frac{2}{3}$  secs.

220 yds. Handicap (open). 1 T. G. Taylor; 2 T. P. Robertson; 3 H. Bradbury. Time 27 $\frac{2}{3}$  secs.

80 yds. (under 11) 1 W. Sankey. Time 11 $\frac{1}{3}$  secs.

80 yards (under 12). 1 A. L. Seddon; 2 W. Sankey. Time 11 $\frac{2}{3}$  secs.

100 yds. Handicap (under 14). 1 J. H. Clynes; 2 J. M. Cook; 3 J. C. Wilde. Time 14 secs.

100 yds. (under 14). 1 J. A. Bunting; 2 J. C. Wilde; 3 F. Wood. Time  $15\frac{2}{3}$  secs.

100 yds. Handicap (under 15). 1 H. Bradbury; 2 E. Fitton; 3 E. Hartley. Time  $13\frac{1}{2}$  secs.

100 yds. Handicap (over 15). 1 T. G. Taylor; 2 W. S. Booth; 3 T. P. Robertson. Time  $11\frac{2}{3}$  secs.

100 yds. (open). 1 T. G. Taylor; 2 W. S. Booth; 3 T. P. Robertson. Time  $10\frac{1}{2}$  secs.

80 yds. Egg-and-Spoon Race (under 12). 1 H. Robinson.

High Jump (under 14). 1 J. H. Clynes; 2 J. A. Bunting; 3 M. Rome. Height 3 ft. 8 in.

High Jump (open). 1 W. S. Booth; 2 T. P. Robertson; 3 T. G. Taylor. Height 4 ft. 8 in.

Long Jump (under 14). 1 J. M. Cook; 2 J. Ashton; 3 W. Noble. Distance 13 ft. 8 in.

Long Jump (open). 1 T. G. Taylor; 2 W. S. Booth; 3 T. P. Robertson. Distance 16 ft. 1 in.

Quarter-Mile Handicap (under 14). 1 J. A. Bunting; 2 A. L. Seddon; 3 J. Ashton.

Quarter-Mile Handicap (over 14). 1 T. G. Taylor; 2 T. P. Robertson; 3 H. Bradbury. Time 62 secs.

Old Boys' Race. W. Fort.

Obstacle Race. 1 H. Robinson; 2 H. P. Hall; 3 J. Taylor.

Consolation Race. 1 W. Noble; 2 G. Ross.

Tug-of-War. Lees House (captain, W. S. Booth) beat Platt House (captain, W. H. Hall).

Old Boys' Tug-of-War. West's team won.

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### SWIMMING EVENTS.

The Swimming Sports were held at the Corporation Baths, on Monday, July 27th. The results were as follows:—

Senior Scratch (5 lengths). 1 W. Young; 2 H. Hall; 3 J. B. Hilton. Time 1 min.  $52\frac{2}{3}$  secs.

Senior Handicap (2 lengths). 1 G. Hilton; 2 W. Young; 3 H. Hall. Time 36 $\frac{2}{3}$  secs.

Junior Scratch (2 lengths). 1 R. U. Taylor; 2 J. Ashton. Time 51 secs.

Junior Handicap (under 15, 2 lengths). 1 R. U. Taylor; 2 W. Cheetham; 3 H. Hall.

Diving Competition. 1 J. W. Slater; 2 W. Young; 3 R. T. Ebrey. Length of dive 34 ft.

Beginners' Race. 1 J. Ashton; 2 J. C. Wilde.

Squadron Race. 1 Assheton House; 2 Lees House; 3 Platt House

Balloon Race. 1 W. S. Booth; 2 W. Young.

The prizes were afterwards kindly distributed by Mrs. Pickford. A vote of thanks to Mrs. Pickford was moved by J. West, and seconded by J. Fletcher; and the School signified its approval by three hearty cheers.

OFFICIALS:—Referee: Mr. R. Pym. Judges: Messrs. H. S. Edwards, A. H. Webber, and A. F. Woode. Starter: Mr. W. Earnshaw. Timekeeper: Dr. L. F. Potter.

W. R. W.

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## Football Notes, 1908-9,

A LARGE number of last season's Football XI having left during the summer term, the School was left with a rather weak team, there being only three of last year's XI staying on at School. The team was thus a new one, and we did not for a moment expect the same success that last season's XI gained. That we have not had it will be seen by glancing through the following results:—

P.	W.	L.	D.
8	1	7	0

The impression gained, of course, is that the team must be very poor indeed. This is not so, for although in many cases our XI has been beaten by a great number of goals, it is not because the XI have played badly, but more often because

they have been pitted against much heavier teams (e.g. Bury G.S., Bolton G.S.). Full back was about our weakest point, but Hodgkinson and Brierley are now filling that position fairly creditably.

#### FIRST XI MATCHES.

Oct. 3rd. WERNETH.—Home. The School were assisted by Messrs. Edwards, Woode, Cockell, and Dove. The game had only been in progress about five minutes when a rather serious accident happened, which delayed the game for some considerable time. T. G. Taylor and Hutchinson collided heavily together, both receiving serious cuts about the head, which necessitated their leaving the field. This accident rather upset the game, but shortly before half-time Mr. Cockell opened the score for the School with a brilliant shot. In the second half the game got very exciting, especially when H. Ashton scored for Werneth. Shortly after this goal J. Ashton completely beat Slater with a fine shot. More exciting play followed, and the game resulted in the School losing by 2 goals to 1.

Oct. 7th. MASTERS.—Home. In this match the School were rather overweighted, but nevertheless played very well. The Masters scored 2 goals in the first half, while the School failed to score. In the second half the School played up splendidly, and equalised. The Masters then scored 3 goals in succession, and when time was called the score was 5 goals to 2 in favour of the Masters. Hodgkinson was conspicuous by his sure kicking. Scorers: Bradbury 1, Hodgkinson 1.

Oct. 10th. MANCHESTER GRAMMAR SCHOOL (2ND XI).—Home. In this match the School were without Midgley and T. G. Taylor. Manchester brought a strong, heavy team, which completely outplayed us, and the game ended in the School losing by 6 goals to 1. Hartley scored for the School.

Oct. 17th. BURY GRAMMAR SCHOOL.—Home. No comment needs to be made on this match. It is sufficient to say that we were completely beaten. Result: 9—0.

Oct. 24th. WARRINGTON GRAMMAR SCHOOL.—Home. This match was looked forward to with the keenest interest. T. G. Taylor scored when the game had been in progress about five minutes, and this success was closely followed by a similar one from Bradbury. The School were playing excellently, and the right wing was especially noticeable. In the second half Warrington played up better, and scored 2 goals. Our forwards, however, got going again, and repeatedly beat the Warrington backs. The School, after a brilliant display, won by 6 goals to 2. Scorers: T. G. Taylor 2, Bradbury 2, Mellor 1, Hilton 1.

Nov. 4th. STAND GRAMMAR SCHOOL.—Home. The School expected an easy game on this date, but as the result shows they were disappointed. T. G. Taylor opened the score for the School, but Stand equalised before half-time. In the second half the School backs seemed unable to check the opposing forwards. The School lost by 4 goals to 3. Scorers: T. G. Taylor 1, Bradbury 1, E. E. Mellor 1.

Nov. 21st. BOLTON GRAMMAR SCHOOL.—Away. This match somewhat resembled the Bury one, but if anything was a little worse for the School. Bolton scored 8 goals in the first half and 6 goals in the second half. Hartley scored our only goal. Result: 14—1 against the School.

Dec. 5th. MASTERS AND SCHOOL V. WERNETH.—Home. T. G. Taylor, Hodgkinson, and Slater played for the Masters. In the first half T. G. Taylor scored a goal for the Masters, who were having the best of the game. Half-time: 1—0. In the second half the Masters seemed unable to hold out, and a great many easy chances of scoring were badly missed. Werneth, on the other hand, were quite fresh, and H. Ashton, their centre forward, played a splendid game, scoring 4 goals. Result: 7—1 for Werneth. Scorer: T. G. Taylor.

Dec. 12th. OLD BOYS.—Home. We looked forward to this match very much, as several of last season's team were playing. Our opponents scored first, but soon afterwards T.

G. Taylor scored for the School. In the second half the Old Boys scored twice. Result : 3—1 for Old Boys. Scorer : T. G. Taylor.

Scorers : T. G. Taylor 5, Bradbury 4, Hartley 2, E. E. Mellor 2, Hodgkinson 1, Hilton 1, Mr. Cockell 1. Total 16.  
T. G. T.

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## Old Boys' Notes.

SEVENTH ANNUAL REPORT (DECEMBER 2ND, 1908).

**I**N presenting this Report your Committee regrets that the membership does not increase to the extent that it is considered it should do, there only being at the present time about seventy members\* ; and the Committee again appeal to the boys leaving school to join the Association, and to remember that one of the objects of the Association is to meet together and renew old acquaintances made during school life, also to provide a link between past and present members of the school, whether masters or pupils.

The Seventh Annual Dinner was held at the School on December 12 last, the members present only numbering 23, which was very disappointing. The toasts were "The School," proposed by Mr. J. WEST, responded to by Mr. PICKFORD, and "The Association," proposed by Dr. POTTER, the response being made by Mr. W. L. MIDDLETON.

During the year the usual Cricket and Football Matches against the School have been played, and were very enjoyable.

Two Cricket Matches were arranged by Mr. C. E. Garfitt, the Cricket and Football Secretary, against Ashford-in-the-Waters and Longstone, for August Bank Holiday week-end. Unfortunately, the one fixed for the Saturday against Ashford could not be played owing to the late arrival—it being nearly

\*Since this meeting there has been a very considerable increase in the number of members, and the Association is in quite a flourishing condition.

six o'clock—of the Old Boys. The delay was caused by a railway “smash-up” near Peak Forest. The match on Monday v. Longstone was lost, the Old Boys having such a weak team. The week-end was very much enjoyed.

Since our last Annual Meeting we have to record the great loss this Association has sustained by the death of Mr. Ellison, who was one of our Vice-Presidents. His interest in the Association was very sincere, and he looked forward to it being a credit not only to the School but to the town generally. A wreath, in the name of the Old Boys' Association, was sent to his funeral.

A resolution will be put before you to-night which has for its object the alteration of Rule 2. The chief part of the resolution is the reduction of the age limit from 18 to 16 years, by which it is hoped, if passed, will be a means of increasing the membership, as most boys will then be able to join the Association on leaving School, and not have to wait two years, as at present, before being eligible.

R. BARLOW, HON. SEC.

The alteration of Rule 2, alluded to in the above Report, was passed at the Annual Meeting, and reads as follows:—

“An Old Boy to be eligible for membership must have been at the School for one year; such Old Boy must have left from the Upper School, or at the time of admission to membership of the Association have attained the age of 16 years. This rule may be waived as regards Old Boys who left School prior to 1902.”

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### The Dinner.

The Eighth Annual Dinner of the Oldham Hulme Grammar School Old Boys' Association was held on Tuesday evening, December 15th, at the Cafe Monico, Union Street, Oldham, under the presidency of Mr. Pickford, the Headmaster

of the School. There was a very good attendance, and it was pleasing to note that there were present quite a number of what might be termed younger Old Boys.

After the usual loyal toast had been honoured, Mr. HALL proposed the toast of "The School," and said that he was sure there was a great and glorious future for the School. For that end the Headmaster organised the School, and the staff gave him every assistance. As Old Boys it behoved them to do all they could to help the School. They were Old Boys living in an industrial centre where secondary education did not receive the support it ought to do. The School had recently been very much criticised by certain persons in a local newspaper, and he thought that the best reply that could be given to such criticisms was to be given in the life and character of the Old Boys of the School. He said that the aim of the School was not solely to enable a boy to pass examinations or to earn money, but to enable him to face and overcome the problems of life which would come before him. The School was still young, and there were great possibilities before it.

Mr. PICKFORD, in replying on behalf of the School, said that to prove that the School was a living success it was only necessary to look round the room and see the men who were beginning to make names for themselves in this town and in different parts of the country. He wished to impress upon them that the School did not exist for the benefit of the present members only, but for the benefit of the community in general, and for that end it had been endowed. He referred to the very good work done for the School by the Governors, and especially by Mr. Booth, who, he said, had done much "hard labour" for it. He always wished his boys to do well in examinations, but, as Mr. Hall had said, the passing of examinations was not the sole aim of the School.

Mr. COCKELL (assistant master), in proposing the toast of "The Association," said that he was pleased that the Committee had honoured him with the proposal of that toast,



as there was not a keener Old Boy than himself. He had been brought up at a School where the love of school was instilled into him from the time that he went there. He appealed to the Old Boys present not to let their keenness for the School decrease with increasing years.

Mr. W. E. MILLINGTON replied on behalf of the Association, and remarked on the good attendance of Old Boys that evening, which was very gratifying. He said that the thanks of the Association were due to Mr. and Mrs. Pickford for the way in which they had assisted the Association to obtain new members. As a result of their recent efforts there were 29 new members on the register, and 22 more had promised to join. He was pleased to say that the Association was getting many younger members, and he hoped that, as the age limit had now been reduced, the number would be largely increased. He said that it was intended to increase the Committee, such increase to be made up from boys who had left the School within the last three years. But he said that increased membership was not the only object of the Association, and he appealed to Old Boys to show a keenness for everything in connection with the Association.

Music, songs, recitations, and smoke agreeably filled up the remainder of the evening, the first three being under the direction of Mr. H. Mitton, Mr. Hindle (of Manchester) contributing several humorous items.

The singing of "Auld Lang Syne" and "God Save the King" brought to a close one of the most successful gatherings held in connection with the Association.

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### **Locomotive Head-Lights.**

**O**N every railway in the kingdom a certain code of head-lights is in force in order to intimate to the signalmen and others concerned in the running of the trains either the character of a train—express, ordinary, or goods—or its route or destination. The system most generally used is

that now known as the National Code of Engine Head-Lights, which is maintained with white lights only, and is used on almost all the important British lines. In describing the various head-lights, it may be pointed out that during the day-time the usual plan is to place the unlighted lamp or lamps in the required positions on the front of the locomotive, and so the same indication is arranged as in the case of the night signal. Engines carrying the "national code" require four lamp-irons—one at the base of the chimney, one in the centre of the buffer-beam, and the other two one on each end.

One single head-light placed just below the funnel denotes an ordinary "local" or stopping train. An "excursion" or "special" train, if stopping locally, likewise observes this means of identification. Two lamps, one on each side of the buffer-beam, are carried by an "express passenger" train. The interpretation placed by various railway companies on the term "express" is one that shows considerable latitude; and a train which might be thus represented by one company is one at which another company might, metaphorically, turn up its nose. A train of empty passenger coaches carries three white lights in a triangle. We next come to the goods trains, which are divided into five classes. The first class carries one head-light on the right end of the buffer-beam (standing facing the way the engine is going), and consists of express, fish, meat, fruit, horse or cattle trains, when these are composed of passenger stock—that is, rolling stock fitted with the Westinghouse or automatic vacuum brake, which can be applied from the engine throughout the train. This enables this class of goods train to be run more quickly than the ordinary goods train, as it can be pulled up quickly in case of emergency. The trains of this class have precedence over all other goods trains, which must be shunted for them when required; and each succeeding class of goods train described bears similar precedence over the classes below it in the order mentioned. The next two classes are also described as express goods trains, being distinguished as "Class A" and "Class B"

respectively. The former class, carrying one light under the chimney and one over the left buffer, consists of fish, meat, fruit, or cattle trains, composed of goods vehicles proper, and not passenger stock as before ; while the latter, carrying one light under the chimney and one in the centre of the buffer-beam, comprises also the same type of traffic, which does not, however, require such great haste in transit. Goods trains are included in the first three classes, which, nevertheless, cover long distances without calling frequently to attach or detach trucks, carry three lights along the buffer-beam. This class includes trains of minerals, such as coal, ballast for the permanent way, and also empty truck trains. Two head-lights on the buffer-beam, one in the centre, and one on the left side, are carried by the ordinary stopping goods trains, which consist of trucks sorted from those composing the faster classes described above, and destined for intermediate stations, at all of which these trains stop to attach or detach trucks. The only remaining head-light of the "national code" is that of one lamp over the right-hand buffer, which is carried by light engines, and also by an engine with a goods brake only attached.

I trust that the reader will be enabled, whenever he may chance to be travelling, to recognise a "national code" of engine head-lights, and so to identify any particular train which he may see ; and I think that its interpretation will afford a very interesting study.

S. S. H.

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## **The Dispersion of Seeds.**

A PAPER READ AT A MEETING OF THE NATURAL HISTORY SOCIETY.

**A**T the end of the season every plant is liable to die, but if the species is to be maintained, provision must be made to ensure this maintenance. Therefore, all plants must produce a fruit, which, under favourable conditions, will develop into a similar plant.

In the higher plants, which are called "Phanerogams" because of the conspicuousness of their flowers or reproductive organs, the egg-cell or "ovum" lies within an ovule, and after fertilisation grows into an embryo plant, with one or two primary leaves—all before the separation from the parent plant. What is separated to begin, in favourable conditions, a new and independent life, is a seed, which may be defined as "a ripe ovule containing an embryo plant." This mode of reproduction by seeds is so distinctive of the Phanerogams that they are often and conveniently called "seed plants," or "spermaphytes."

The seed is formed in the following manner :—A mass of tissue—the nucellus—borne by the carpellary leaf contains a female "spore," or embryo-sac, whose nucleus divides into a female nucleus (which will develop if fertilised into an embryo), and a number of other nuclei of minor importance.

The fertilised nucleus in the embryo-sac, embedded in the nucellus and surrounded by the coats of the ovule, develops into an embryo plant, and the whole structure is called a "seed." Nature has provided all plants with a means of dispersion of their seeds which will best ensure the continuance of the species. This is effected in various ways. Some merely drop their seeds ; others fling them away ; others have hooks whereby to catch in the coats of passing animals ; while wind and water spread them everywhere. I will first deal with those fruits known as sling fruits, and, as example :—

I.—The Squirting Cucumber. This plant has a curious fruit. It resembles a small, fleshy cucumber, covered with bristles, and is borne by a hooked stalk, which projects into the fruit like a stopper. When the seeds are quite ripe the tissue surrounding them is transformed into a mucilaginous or sticky mass. Also the tissue in the neighbourhood of the stopper just referred to, breaks down at the same time, and thus the connection between the stalk and the fruit is loosened. In the wall of the fruit is a layer of cells under

great tension, and endeavouring to stretch itself out. As long as the fruit is unripe such expansion is prevented by the tense tissue close to the stalk, but with the ripening of the fruit this obstacle is removed. The fruit then severs itself from the conical end of the stalk, and at the same moment the expansion of the strained layer of tissue takes place. The consequence is that the interior is subjected to great pressure, and the seeds, together with the surrounding mucilage, are squirted out with considerable force through the hole previously closed by the end of the stalk.

II.—Wood Sorrel. A special case of expulsion of seed is found in the natural order to which this plant—Wood Sorrel—belongs. In this case it is the seed-coat that possesses a special expanding tissue adapted to the expulsion of seeds. One of the deeper layers of the seed-coat is composed of tense cells, and is itself in a highly strained condition, while the outer layers are not in a state of tension. When the seed is quite ripe the cell-membranes in the strained layer swell out, and the outer layer, being unable to withstand the pressure to which it is subjected, is rent asunder, and the edges of the fissure thus formed roll suddenly back. A violent jerk is given to the enclosed seed, and it flies out through the fissure in the capsule immediately in front of it.

III.—Herb Robert. This plant has a five-angled column rising up in the centre of a circle of five carpels. The carpels are hemispherically inflated at the base, and terminate above in long bristles or beaks, each of which contains a single seed. When the seeds are ripe the tissue composing the beaks undergoes desiccation (*i.e.*, it dries up), which, however, is not of uniform intensity throughout. The outer layer, consisting of thin-walled cells, dries up more quickly than the inner layer, which is composed of thick-walled cells. The result is that the beak “lifts” itself away from the axial column, and curls up externally like a watch-spring, and the seed is thrown about  $2\frac{1}{2}$  metres, while the empty rolled-up carpels remain fixed, and the whole resembles a chandelier.

IV.—Violet. The fruits of this plant divide into three boat-shaped valves, each containing two rows of seeds. The seeds are pressed upon by the valves, the result being that the smooth seeds are shot out with about equal force as when a cherry stone is flicked between the finger and thumb. The seeds are ejected in a regular order.

V.—Everlasting Pea. The walls of the pods of the Everlasting Pea are composed of thin-walled cells. When the pods dry they split down the centre. Each portion curls up like a ringlet, and the seeds are thrown about one metre. The act of expulsion in the foregoing is usually accompanied by a characteristic noise like that of the bursting of a bladder, and the range of projection is least when the seeds are small and light, and the greatest when they are large and heavy. Also the expulsion is due to the swelling of the cells or the drying up of moist cell-layers.

Next come the Catapult Fruits. Here the expulsion of the seeds is entirely due to the elasticity of the stalks of the plants. The range of dispersion is still more marked in the case of groups which creep or hop along the ground. These fruits are furnished with stiff bristles, which project on the outside of their coats. These bristles continually change their position, and so propel the fruit or seed, as the case may be, in a definite direction. Most plants depend for the dispersion of their fruits on the wind. In several species of clover there are only a few perfectly developed flowers in the cluster at the end of the flower stalk, whilst in the centre are a number of imperfectly developed flowers. When the pods are formed by the perfectly formed flowers the calyx teeth of these imperfectly formed increase in size and number, and assume the shape of hairy bristles, and bend over outwards and form a loose globular enclosure round the head of the fruit. These balls afterwards become detached, and are rolled away by the wind. In some cases even entire plants are uprooted or have their stems severed from the roots at the base in the fruiting season, and are then rolled away like balls by the wind. One of the

commonest devices for keeping fruits and seeds suspended in the air is of the nature of a parachute. This form of mechanism occurs in the shape either of tufts of hairs or of web-like edges. Sometimes the parachute and the body it keeps in suspension are connected by a slender stalk, as in the Dandelion. In the Dandelion, the pappus—that is, the feathery parachute that carries the seed—is formed early, and after the floret has fallen the neck lengthens, and the pappus spreading out, the whole structure is carried away on the wind. In the case of many trees—Lime, Sycamore, Hornbeam, and Maple—wing-like structures are formed to catch the wind. This is also the case with Hop, Pine, Elm, Ash, and many others.

Another example is the Travellers' Joy or Wild Clematis. This plant forms a head of achenes somewhat like Herb Bennet, but in the Wild Clematis the styles become long and hairy, so that they are easily carried by the wind.

Next come the Hooked Fruits. Some fruits are provided with hooks, which catch in the fleece of sheep or any animal touching them. The first example here is Agrimony. In this plant the calyx closes when the petals, &c., have fallen, and the backs of the sepals are covered with hooks, by means of which the seed is carried great distances.

Another example is Herb Bennet. This plant bears a head of achenes, which increase in size after the flower has fallen. For some time after they carry the style, but finally that falls off, and a firm hook remains.

As a last example we will take Burdock. This plant grows to a great height in favoured spots. It has not, correctly speaking, a hooked fruit, but the whole head is often carried long distances by the hooks on the circle of bracts enclosing the florets. These fruits have also a pappus; so they have a double chance of wide dispersion.

Next and last come those fruits which are simply dropped from the parent plant on to the ground. As the first example we will take Honesty. On the chart is seen the development

of the seed vessel until fully grown. Then, when dry, the valves open from below and fall away, leaving the seeds exposed on the replum. These gradually drop as they ripen, and the well-known silvery replum remains.

As a second example, Fool's Parsley. This plant has an interesting fruit. When dry it splits in two, and each portion is held on a slender axis, and when quite dry falls off. Others of this kind are Celery, Parsley, Fennel, and Carrot.

The last example is the Poppy. The seeds of the Poppy are dropped through little doors, or valves, as they are called, with over-hanging eaves, which protect them from rain. The seeds are dispersed by the swinging of the "head," or by the final fall of the stalk when dead.

In summing up, we may say that the chief means of dispersion of fruits and seeds are:—Those dropped, those with hooks, those thrown, and those wind-blown.

J KERSHAW.



## The Theory of Photography.

**I**N an interesting lecture on October 8th, Dr. Potter first explained the similarity that exists between the mode of action of the camera and that of the eye.

The first and simplest form of camera, commonly known as the "pin-hole" camera, was then discussed, and its disadvantages pointed out. These disadvantages are the absence of fine detail in the image, and the length of exposure necessary to form a moderately sharp picture.

The use of a lens to remedy this, and the principal defects in lenses, were next explained. The first defect, known as chromatic aberration, is due to the fact that ordinary white light is composed of light of various colours, and also contains rays which, though invisible to the eye, act on the photographic plate. In passing through a single lens, these different rays are not brought to the same focus. This causes the image to be blurred. The second and third defects—"spherical aberration" and "curvature of field"—were both



shown to arise from the shape of the lens, the former causing uniform blurring, and the latter blurring round the edges of the picture.

It was then shown that by the use of a stop the above defects could, to a great extent, be remedied—at the expense, however, of the “speed” of the lens. The stop, if used with a single lens, was seen to produce a distortion in the image, the nature of this distortion depending upon the position of the stop. If the latter is placed in front of the lens, straight lines at the edge of the picture are curved outwards, and the distortion, appropriately known as “barrel-shaped,” results. On the other hand, if the stop is placed behind the lens, the marginal lines are curved inwards, and the “cushion-shaped” distortion results. This suggested the use of two lenses, with a stop between them, when the two defects would compensate each other.

It was also explained that a modern lens consists of combinations of different lenses, the function of each combination being to eliminate a special defect, such as chromatic aberration, spherical aberration, &c.

Finally, a brief explanation was given of the chemical changes taking place during the development and fixation of the latent image on the plate, and the subsequent preparation of the positive from the negative.

The lecture was very much appreciated by the members of the Society, and the meeting terminated by a hearty vote of thanks being accorded to Dr. Potter, on the motion of W. R. Wilde, and seconded by J. W. Slater.



### Magazines Received.

The Editors beg to acknowledge with thanks the receipt of the following:—“The Savilian,” “The Whitgiftian,” “The Boltonian,” “The Leodiensian,” “Hulme Victorian,” “Middlesbrough High School Magazine,” “Warringtonian,” “Sheffield Royal Grammar School Magazine,” “Bury G.S. Magazine,” “Olavian.”

### Marriages

**BRIERLEY—BRADDOCK.** On July 15th, 1908, at Union Street Congregational Church, by the Rev. J. F. Brown, William Wallace Brierley to Florence Annie, daughter of Joseph Braddock, Esq.

**COCKELL—HAYS.** On January 1st, 1909, at Christ Church, Brondesbury, by the Rev. W. Baker, D.D., Frederick Harold Cockell to Agnes Elizabeth, second daughter of the late Alfred Hays, Esq.